

Work Order ID 121688

121688

Page 1

Thursday, June 26, 2014 3:06:58 PM

Item ID: D4885-2 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: End Fitting
 Start Date: 6/26/14 Start Qty: 10.00 *10* Cust Item ID:
 Required Date: 6/26/14 Req'd Qty: 10.00 *10* Customer:
 Reference:

Approvals: Process Plan: CZ Date: 14/06/30 Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4885	REV A

100 0.00

100

Outsource5

Outsource process - Machining

Memo

ISSUE P/O: 24906
 POSSIBLE SUPPLIER:ATG

C OF C IS REQUIRED

110

QC6- Inspect dimensions to drawing

110

QC

Quality Control

Memo

150

PURCHASING

150

Purchasing

Purchasing

Memo

Issue P/O: 24906
 LPI Per ASTM 1417 LEVEL 2
 Certificate of conformaty is required

done @ ATG

CZ 14/07/08 10

(10)

DAS
 38
 9-89

NOV 26 2014

CZ 14/07/08

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>
--	--	---

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
--	--	---	--

Work Order ID 121688***121688***

Page 2

Thursday, June 26, 2014 3:06:58 PM

Item ID: D4885-2 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: End Fitting
Start Date: 6/26/14 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 6/26/14 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Receive & Inspect for Damage & Mat'l Certs	0.00							
160									
Packaging	Memo	0.00							
Packaging	Ensure certificate of conformity is attached								
			ST	ST 136					
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

10x SP14-11-26
DAS
46
9-89 NOV 26 2014
10x
14/12/2
11-27

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>
--	--	---

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
--	--	---	--

Picklist Print

Thursday, June 26, 2014 3:06:57 PM

Page 1

Work Order ID: 121688

121688

Parent Item: D4885-2

D4885-2

Parent Item Name: End Fitting

Start Date: 6/26/14

Required Date: 6/26/14

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A NEW ISSUE 14-01-28 JLM VERIFIED BY:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4885-2P		Purchased	No				Each	0.0000		10			
D4885-2P									**	8/14-12-2			
End Fitting													
M174PH-H900R2.000		Purchased	No				f	47.0458		4.315789			DAS 13 9-89
M174PH-H900R2 000									**	14-7-10			
17-4SS H900 ROUND BAR 2.000													

Location

MAT031

M128314

~~M128809~~

Loc Qty

47.0458

22.4

24.6458

Loc Code

4.4 Rt

~~6-42~~

2 feet extra

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

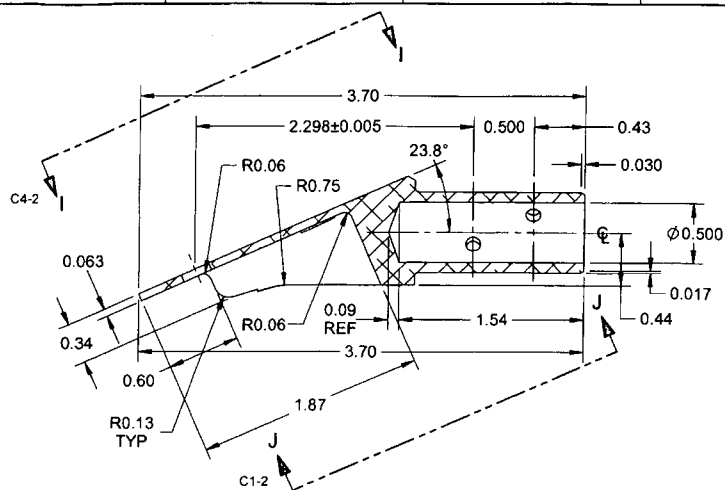
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>
--	--	---

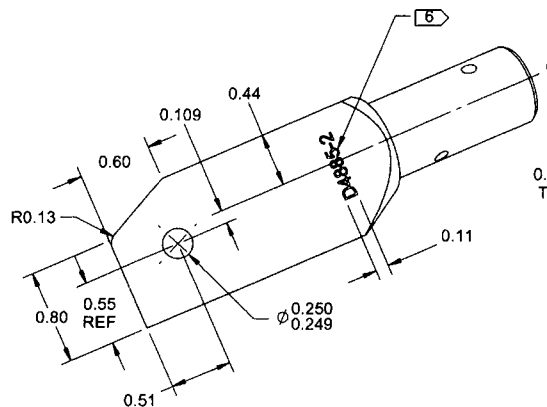
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

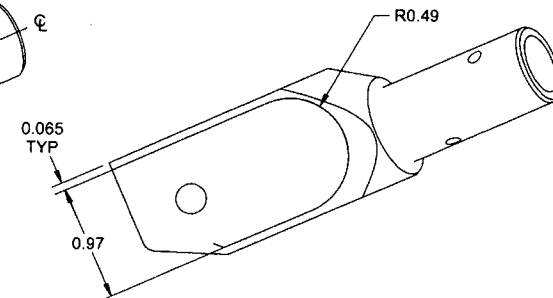
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
--	--	---	--



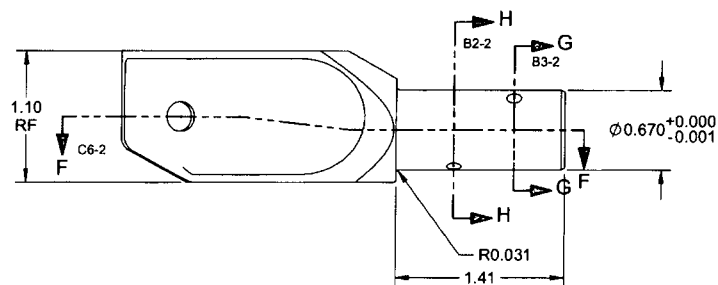
SECTION F-F B6-2



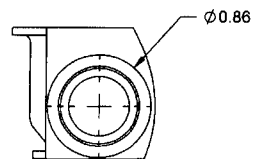
AUXILIARY VIEW I-I D8-2



AUXILIARY VIEW J-J C7-2



SECTION G-G B6-6



SECTION H-H B6-6

D4885-2 END FITTING

NOTES:

- 1) MATERIAL: 17-4 PH/S17400/TYPE 630 SS ROUND BAR, H900 CONDITION
PER AMS 5643/ASTM A564
DART SPEC M17-4-R
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.3.
ENGRAVE P/N USING 0.11 HIGH LETTERS TO A MAX. DEPTH OF 0.010
- 7) WEIGHT: 0.22 lbs
- 8) LIQUID PENETRANT INSPECT PER QSI 038 6.1.1 (ASTM E1417 LEVEL 2)

C214/06/30
W/O: 121688

APPROVED

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	DC	DRAWING NO. D4885	REV. A
MFG. APPR.	JLM		SHEET 2 OF 5
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	END FITTING	NTS
DATE	13.12.01	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO24906

Purchase Order Date 7/8/2014

PO Print Date 8/20/2014

Page Number 3 of 8

From :
A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

6	D4885-3P	End Fitting	12/19/2014	FN	6.00	✓	\$166.50	\$999.00
			Yes		Each			
			12/19/2014					

AS PER DWG D4885-3 REV. A
B121467
MAT: 174PH-H900R 2" M128314

SP14-11-21

Line Total: \$999.00

7	D4885-2P	End Fitting	12/19/2014	FN	10.00	○	\$138.50	\$1,385.00
			Yes		Each			
			12/19/2014					

AS PER DWG D4885-2 REV. A
B121688
MAT: 174PH-H900R 2" M128314

SP14-11-21

Line Total: \$1,385.00

8	D4806-1P	Clevis	12/19/2014	FN	12.00		\$92.50	\$1,110.00
			Yes		Each			
			12/19/2014					

AS PER DWG D4806-1 REV. B
B121453
MAT: 174PH-H900R 1" M127334

Note:

8/20/2014



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 909132

Date: 21-Nov-14

To

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
Canada

Ship To

CHANTAL LAVOIE
DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
Canada

Ph 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.		
16 ea	Part: D4884-1P END FITTING, EYE Job: 16640	Rev: A PO: PO24906	Line: 5
6 ea	Part: D4885-3P END FITTING Job: 16641	Rev: A PO: PO24906	Line: 6
10 ea	Part: D4885-2P END FITTING Job: 16642	Rev: A PO: PO24906	Line: 7
DATE: 21 Nov 2014			
CERTIFIED SIGNATURE: [Signature]			
RECEIVER SIGNATURE: _____			
Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			
CERTIFICATE OF CONFORMANCE			
A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT CONFORM TO THE REQUIREMENTS.			
MADE IN CANADA.			



F.A.I.

First Article Inspection Report

#

554

Requesting Company: Dart Aerospace PO#: PO25894 Line: 3 Qty: 10Part Number: D4885-2P Rev: A Part Description: End FittingFAI Supplied by: A.T.G. Industries Inc. FAI Prepared by: Emily Louis-Seize Date: 22-Oct-2014Qty Inspected: 10 FAI Inspected by: Mike Csontos Date: 16-Nov-2014

Material and/or Special Processes

Type	Description	Specification Number/Code	Certificate of Conformance Number:
Material	17-4 PH/S17400/Type 630 SS Bar	AMS5643/ASTM A564	Supplied by Customer
Special Process	Liquid Penetrant	QSI 038 6.1.1/ASTM E1417, Level 2	PO#: 20140464

Inspection Information and Results

Char#	Location	Requirement	Result	UoM	Pass/Fail	Measurement Equipment:	Operation #:
1	D7	3.70	3.699	Inch	Pass	Caliper	1
2	D7	2.298±.005	2.299	Inch	Pass	Height Gauge	3
3	D7	R.06	R.06	Inch	Pass	Radius Gauge	2
4	D7	R.75	R.75	Inch	Pass	Comparator	2
5	D6	23.8°	23.8°	Degree	Pass	Comparator	2
6	D6	.500	.499	Inch	Pass	Caliper	3
7	D6	.43	.422	Inch	Pass	Caliper	3
8	D6	.030	.029	Inch	Pass	Comparator	1
9	D5	Ø.500	Ø.503	Inch	Pass	Gauge Pin	1
10	D5	.017	.017	Inch	Pass	Comparator	1
11	D6	.44	.437	Inch	Pass	Height Gauge	2
12	D6	1.54	1.545	Inch	Pass	Depth Micrometer	1

5014-11-26

Inspection Information and Results							
Char#	Location	Requirement	Result	UoM	Pass/Fail	Measurement Equipment:	Operation #:
13	C7	3.70	3.686	Inch	Pass	Caliper	2
14	D7	.09 REF	.125	Inch	Pass	Depth Micrometer	1
15	C7	R.06	R.062	Inch	Pass	Radius Gauge	2
16	C7	1.87	1.874	Inch	Pass	Height Gauge	2
17	C8	R.13	R.125	Inch	Pass	Radius Gauge	2
18	C8	.60	.605	Inch	Pass	Height Gauge	2
19	C8	.34	.334	Inch	Pass	Caliper	2
20	D8	.063	.064	Inch	Pass	Micrometer	2
21	D5	.60	.603	Inch	Pass	Comparator	2
22	D4	.109	.110	Inch	Pass	Height Gauge	2
23	D4	.44	.441	Inch	Pass	Height Gauge	2
24	D3	Note 6	D4885-2	Inch	Pass	Visual	2
25	C3	.11	.11	Inch	Pass	Caliper	2
26	C4	Ø.250/-.249	Ø.2495	Inch	Pass	Gauge Pin	2
27	C5	.51	.514	Inch	Pass	Caliper	2
28	C5	.80	.803	Inch	Pass	Comparator	2
29	C5	.55 REF	.55	Inch	Pass	Micrometer	2
30	D5	R.13	R.125	Inch	Pass	Radius Gauge	2
31	D3	.065 TYP	.066	Inch	Pass	Micrometer	2
32	D1	R.49	R.485	Inch	Pass	Gauge Pin	2
33	D3	.97	.97	Inch	Pass	Caliper	2
34	B5	Ø.670+.000/-.001	Ø'.6697	Inch	Pass	Micrometer	1
35	B6	1.41	1.411	Inch	Pass	Height Gauge	1
36	B6	R.031	R.030	Inch	Pass	Radius Gauge	1
37	B8	1.10 REF	1.101	Inch	Pass	Caliper	2

Inspection Information and Results							
Char#	Location	Requirement	Result	UoM	Pass/Fail	Measurement Equipment:	Operation #:
38	B4	Ø.86	Ø.863	Inch	Pass	Comparator	1
39	B3	36.8°	36.8°	Degree	Pass	Comparator	3
40	B3	Ø.125 thru	Ø.125	Inch	Pass	Gauge Pin	3
41	B2	23.2°	23.2°	Degree	Pass	Comparator	3
42	B1	Ø.125 thru	Ø.125	Inch	Pass	Gauge Pin	3
First Article Inspection Report Approved and Completed in Full by:				Mike Csontos		Date:	21-Nov-14